

Applicant: Yen-Chuang
Serial No.: 10/731,261
Attorney Docket No.: 67,200-1144

IN THE CLAIMS

Please amend Claim 9.

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LISTING OF CLAIMS

1. (original) A method of polishing a material layer on a wafer, comprising the steps of:
 - determining a non-compensated thickness to be removed from the layer;
 - determining an offset thickness;
 - determining a current removal rate;
 - calculating a compensated removal rate using said non-compensated thickness, said offset thickness and said current removal rate; and
 - polishing the layer according to said compensated removal rate.
2. (original) The method of claim 1 wherein said calculating a compensated removal rate comprises the step of calculating said compensated removal rate according to the following Formula: $\text{Compensated removal rate} = (\text{non-compensated thickness} / \text{non-compensated thickness} + \text{offset thickness}) * \text{current removal rate}$.
3. (original) The method of claim 1 wherein said determining an offset thickness comprises the steps of determining a prescribed material layer thickness, determining a target material layer thickness and determining a difference between said prescribed material layer thickness and said target wafer thickness.
4. (original) The method of claim 3 The method of claim 1 wherein said calculating a compensated removal rate comprises the step of calculating said compensated removal rate according to the following formula: $\text{Compensated removal rate} = (\text{non-compensated thickness} / \text{non-compensated thickness} + \text{offset thickness}) * \text{current removal rate}$.

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5. (original) The method of claim 1 wherein said determining a current removal rate comprises the step of providing a sample wafer, providing a sample layer on said sample wafer, and polishing said sample layer.

6. (original). The method of claim 5 The method of claim 1 wherein said calculating a compensated removal rate comprises the step of calculating said compensated removal rate according to the following formula: $\text{Compensated removal rate} = (\text{non-compensated thickness} / \text{non-compensated thickness} + \text{offset thickness}) * \text{current removal rate}$.

7. (original) The method of claim 5 wherein said determining an offset thickness comprises the steps of determining a prescribed material layer thickness, determining a target material layer thickness and determining a difference between said prescribed material layer thickness and said target material layer thickness.

8. (original) The method of claim 7 The method of claim 1 wherein said calculating a compensated removal rate comprises the step of calculating said compensated removal rate according to the following formula: $\text{Compensated removal rate} = (\text{non-compensated thickness} / \text{non-compensated thickness} + \text{offset thickness}) * \text{current removal rate}$.

9. (currently amended) A method of polishing a material layer on a wafer, comprising the steps of:

determining a non-compensated thickness to be removed from the layer according to said a standard total wafer thickness;

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determining an offset thickness;
determining a current removal rate;
calculating a compensated removal rate using said non-compensated thickness,
said offset thickness and said current removal rate; and
polishing the layer according to said compensated removal rate.

10. (original) The method of claim 9 The method of claim 1 wherein said calculating a compensated removal rate comprises the step of calculating said compensated removal rate according to the following formula: $\text{Compensated removal rate} = (\text{non-compensated thickness} / \text{non-compensated thickness} + \text{offset thickness}) * \text{current removal rate}$.

11. (original) The method of claim 9 wherein said determining an offset thickness comprises the steps of determining a prescribed material layer thickness, determining a target material layer thickness and determining a difference between said prescribed material layer thickness and said target material layer thickness.

12. (original) The method of claim 11 The method of claim 1 wherein said calculating a compensated removal rate comprises the step of calculating said compensated removal rate according to the following formula: $\text{Compensated removal rate} = (\text{non-compensated thickness} / \text{non-compensated thickness} + \text{offset thickness}) * \text{current removal rate}$.

13. (original) The method of claim 9 wherein said determining a current removal rate comprises the step of providing a sample wafer, providing a sample layer on said sample wafer, and polishing said sample layer.

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14. (original) The method of claim 13 The method of claim 1 wherein said calculating a compensated removal rate comprises the step of calculating said compensated removal rate according to the following formula: $\text{Compensated removal rate} = (\text{non-compensated thickness} / \text{non-compensated thickness} + \text{offset thickness}) * \text{current removal rate}$.

15. (original) The method of claim 13 wherein said determining an offset thickness comprises the steps of determining a prescribed material layer thickness, determining a target material layer thickness and determining a difference between said prescribed material layer thickness and said target material layer thickness.

16. (original) The method of claim 15 The method of claim 1 wherein said calculating a compensated removal rate comprises the step of calculating said compensated removal rate according to the following formula: $\text{Compensated removal rate} = (\text{non-compensated thickness} / \text{non-compensated thickness} + \text{offset thickness}) * \text{current removal rate}$.

17. (original) A method of programming a CMP apparatus to polish a material layer on a wafer, comprising the steps of:

- determining a non-compensated thickness to be removed from the layer;
- determining an offset thickness;
- determining a current removal rate;
- calculating a compensated removal rate using said non-compensated thickness, said offset thickness and said current removal rate;

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programming said compensated removal rate into the CMP apparatus; and
polishing the layer according to said compensated removal rate using the CMP
apparatus.

18. (original) The method of claim 17 The method of claim 1 wherein said calculating a compensated removal rate comprises the step of calculating said compensated removal rate according to the following formula: $\text{Compensated removal rate} = (\text{non-compensated thickness} / \text{non-compensated thickness} + \text{offset thickness}) * \text{current removal rate}$.

19. (original) The method of claim 17 wherein said determining an offset thickness comprises the steps of determining a prescribed material layer thickness, determining a target material layer thickness and determining a difference between said prescribed material layer thickness and said target material layer thickness.

20. (original) The method of claim 17 wherein said determining a current removal rate comprises the step of providing a sample wafer, providing a sample layer on said sample wafer, and polishing said sample layer.